

# **Invasive Plant Species in the North Carolina Sandhills Region and Their Impacts**

## **1. Introduction**

Non-native invasive plants pose a significant conservation and compliance challenge for sustainable natural resources management on public and private lands. Invasive plants have the potential to negatively impact Threatened and Endangered Species (T&ES) habitat, T&ES populations, and restrict land use. In addition, invasive species can have negative socio-economic impacts, including reduced property values, which may affect adjacent landowners, agricultural lands, and recreational areas. Without immediate action targeted at preventing, detecting, controlling, and monitoring non-native invasive plants, the magnitude of these negative impacts could increase significantly.

Therefore, as a first step in a proactive attempt to address this challenge, the North Carolina Sandhills Weed Management Area (NCSWMA) is assessing which invasive plants are impacting the region in order to gain specific information on the challenges likely to be faced in attempting to implement control efforts. This request to land managers across the region is intended to be a tool by which the NCSWMA can prioritize future research and management needs.

Your input will remain confidential, as only the NCSWMA Leadership Committee will have access to the raw data. A product of this effort will include a summary of the information on a regional basis that will be placed on the NCSWMA website. Your support in this collaborative effort is greatly appreciated and will be acknowledged.

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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## 2. POC Information

Name	
Organization	
Department	
Title	
Address	
City/State/Zip	
Phone	
Fax	
e-mail	

## 3. Education

To help us gain a better perspective on analyzing the information to be provided, what would best classify your educational background? (Please check the left column next to only one answer.)

✓	Educational field
	Agriculture
	Forestry
	Natural Resources
	Plant Ecology
	Soil Science
	Wildlife Biology

If your educational field is not listed above, please enter it here:

Educational field

## 4. Work Responsibilities

What would best classify your current work responsibility? (Please check the left column next to only one answer.)

✓	Work responsibility
	Agriculture
	Forestry
	Natural Resources
	Plant Ecology
	Soil Science
	Wildlife Biology

If your current work responsibility is not listed above, please enter it here:

Work responsibility

## 5. Technical Qualifications

The following questions deal with:

- (a) General information about your organization,
- (b) Invasive species prevention, detection, monitoring, and management, and
- (c) Interactions between invasive species and Threatened & Endangered Species.

In your opinion, are you the best point of contact for answering these questions?

✓	
	Yes
	No

If not, who is?

Name	
Phone	
e-mail	

## 6. Information on Invasive Species Prevention, Detection, Monitoring, and Management

7. Has a formal inventory/survey for invasive species been conducted on your property, or is one planned?

✓	
	Yes
	No (Skip to question #10)

8. Please list the year(s) when the formal inventory/survey was conducted, or when one is planned.


9. Can we obtain a confidential copy of this information?

✓	
	Yes
	No

10. Has an invasive species management plan been developed for your properties, or is one planned?

✓	
	Yes
	No

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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Please list the year when the invasive species management plan was developed, or when one is planned.

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**11. Has a natural resource management plan been developed for your properties, or is one planned?**

✓	
	Yes
	No

Please list the year when the natural resource management plan was developed, or when one is planned.

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**12. If you answered “yes” to either question 10 or 11, may we obtain a confidential copy of this information?**

✓	
	Yes
	No

**13. Where do you obtain information about invasive species on your property? (Check all that apply.)**

✓	<b>Source</b>
	Word of mouth
	Literature
	Internet
	Informal surveys
	County weed extension

If you have other sources of information not included here, please list them here.

<b>Source</b>

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

## 14. Invasive Plants

15. Please fill in the table below with the following information:

- (a) Each invasive plant species that presently occurs on your property.
- (b) Approximate number of acres affected.
- (c) Severity of the problem (1= species significantly impacts resource quality, 5 = species has no impact)
- (d) Has a survey/inventory been conducted? (formal/informal/not applicable)
- (e) Year of survey/inventory, if applicable
- (f) How is the spread of infestations monitored with respect to the formal or informal survey(s) that are conducted? (formal monitoring/informal/not applicable)

	(a) Invasive Species	(b) No. of acres affected	(c) Problem severity (1-5)	(d) Survey (formal/ informal/ NA)	(e) Year of survey (if applicable)	(f) Infestation monitored (formal/ informal/ NA)
ex.	Japanese stiltgrass ( <i>Microstegium vimineum</i> )	80	2	Formal	2000	Formal
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

## 16. Invasive Plant Management

17. With respect to the invasive plant species listed in question #15, please fill in the table below with the following information:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Species (copy and paste species name from question #24 – invasive plant)	Herbicides used	Plow (y/n)	Hand pull (y/n)	Mow (y/n)	Controlled burns (y/n)	Other control methods (list)	Success of control efforts monitored (formal/ informal/NA)
ex.	Chinese lespedeza ( <i>Sericea lespedeza</i> )	glyphosate	y	y	y	n	NA	Formal
ex.	kudzu ( <i>Pueraria montana</i> )	NA	n	y	y	y	fungus ( <i>Myrothecium verrucaria</i> )	Formal
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

18. Mark the location of the control efforts and indicate the associated acres/miles.  
(Please check all that apply.)

✓	Location	Approx. # of acres/miles	unit
	roadsides		miles
	trailheads		acres
	natural areas		acres

If you need to list other locations of control efforts not included above, please list them here.

Location	Approx. # of acres/miles	unit

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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**19. Please fill in the table below with the following information:**

- (a) List each invasive plant that occurs along the boundary or in areas adjacent to your property.**
- (b) Approximately how close is the infestation to your boundary (meters)?**

<b>(a)</b>	<b>(b)</b>
<b>Species</b>	<b>Distance from boundary (m)</b>

## **20. Controlling Non-Native Invasive Species**

**21. If you have been successful in controlling or eliminating any non-native invasive species, please list the species and technique(s) used.**

<b>(a)</b>	<b>(b)</b>
<b>Species</b>	<b>Technique used</b>

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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## 22. Interactions between Invasive Plants and T&ES

23. Please fill in the table below with the following information:

- (a) Each invasive plant that impacts T&ES on your property.
- (b) The particular T&ES affected.
- (c) Problem severity (Rate from 1-5, where 5 indicates significant T&ES impact)

	(a)	(b)	(c)
	Invasive species	T&ES affected	Problem severity (1 to 5)
ex.	Chinese lespedeza	Michaux's sumac	4
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

24. Please describe the current impact(s) listed above?

Describe:

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Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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**25. Do you foresee additional impacts in the future?**

✓	
	Yes
	No

If yes, please describe:

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**26. Are there any other relevant data available?**

Type of data	Confidential copy available? (y/n)
State natural heritage	
County weed extension	
Contractor generated data or reports	

**27. Is any invasive species research being conducted on your property?**

✓	
	Yes
	No

If yes, please list the research organizations and briefly describe what is being studied:

Research organization	Description of the study

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

## 28. Organization Information

29. How much time (person-hours) does your organization currently invest in control, detection, and monitoring of invasive species per week?

Per week estimate (person-hours) for each season			
Spring	Summer	Fall	Winter

30. How much money does your organization invest in control, detection, and monitoring of invasive species (yearly and per month by season)? Please fill in the table below with the following information:

		Per month estimate for each season			
Expenses	Yearly	Spring	Summer	Fall	Winter
Labor					
Materials					
Other (list below)					
Total					

31. Does your organization use volunteers to support management (not exclusive to invasive species management)?

✓	
	Yes
	No

If yes, please list the groups that conduct volunteer work on your property:

Volunteer group

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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**32. If you use volunteers, please list the average number of volunteers and volunteer work days.**

	Volunteers per work day
	Volunteer work days per month

**33. Is public access permitted or completely restricted on your organization’s properties?**

✓	<b>Public Access</b>
	Permitted
	Completely restricted (Skip to question # 9)

**34. If public access is permitted on your property, what types of public activities are authorized during each season? (Please check the column(s) corresponding to the seasons when specific activities are authorized.)**

Activity	Spring	Summer	Fall	Winter
Fishing				
Hunting				
4x4				
Hiking				
Horseback riding				
Camping				

If your organization authorizes types of public activities that are not included above, please list them here:

Activity	Spring	Summer	Fall	Winter

**35. Do the maintenance vehicles (e.g., mowers, tractors) used on your property reside on-site or are they brought in?**

✓	<b>Vehicle residence status</b>
	Vehicles reside on-site
	Vehicles are brought in
	Some vehicles reside on-site, and other vehicles are brought in

**36. Do you have facilities to clean maintenance vehicles?**

✓	
	Yes
	No

Note: If you need additional rows, pressing the “Tab” key from the last cell in the last row will create an additional row.

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**37. Are maintenance vehicles cleaned before or after field use?**

✓	<b>Vehicles cleaned</b>
	Before use (only )
	After use (only )
	Both before & after use

**38. Does your organization have agricultural outleasing on its properties? (check all that apply)**

✓	<b>Agricultural outleasing</b>
	No agriculture outleasing.
	Livestock
	Crops
	Timber sales

If your organization has agricultural outleasing that is not included above, please list it (them) here.

**Other agricultural outleasing**


**39. If grazing is allowed on your properties, please fill in the table below with the following information:**

(If a type of animal is grazed during more than one season, please list the animal more than once.)

	(a)	(b)	(c)	(d)
	Animal	No. Acres Grazed	Free Range (y/n)	Season
ex.	<i>Cattle</i>	<i>1500</i>	<i>y</i>	<i>Summer</i>
1.				
2.				
3.				

**THIS COMPLETES THE QUESTIONNAIRE**

Thank you for your time and effort.

**PLEASE CLICK THE SUBMIT BUTTON BELOW**